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10/599,462	09/29/2006	Gheorghe Sorin Stan	NL040330US1	9390

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EXAMINER
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ORTIZ CRIADO, JORGE L

ART UNIT	PAPER NUMBER
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2627

MAIL DATE	DELIVERY MODE
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05/26/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/599,462	STAN, GHEORGHE SORIN	
	<b>Examiner</b>	<b>Art Unit</b>	
	JORGE L. ORTIZ CRIADO	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-3, 5-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The newly amended claims introduce the language of “a write displacement event” and “write displacement error signals”. The examiner cannot find where in the specification support for this newly introduced language is found. The only displacement events and/or errors found in the specification as originally filed are of "axial focus displacement".

This amendment introduces new matter added to the specification.

For purposes of examination the claims have been interpreted in light of the supporting disclosure supporting for "axial focus displacement" as originally filed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 2, 3, 5-9, 13, 20 and 21 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2, 20 and 21 recites the limitation “write displacement signals may also include...”, the phrase “may also” makes the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

Dependent claims 3, 5-9 and 13 fall together accordingly.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

For purposes of examination the claims have been interpreted in light of the supporting disclosure that support for "axial focus displacement" as originally filed, instead of the non-supported “write displacement” language, in the art rejections below.

**Claims 14-15 and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Harada et al. JP 2004-079103.**

Harada et al. discloses (See Abstract; FIGS. 1-2) a medium access device, “capable of” writing information in a storage layer of a multi-layer optical storage medium comprising two or more storage layers, the medium access device comprising: light beam generating means (laser diode not shown; [0012]) for generating a write light beam; positioning means for positioning the write light beam in a radial displacement or axial displacement with respect to the storage layers focusing means (19;28; 38; 42; and CPU) for focusing the write light beam in a focal spot at a target storage layer;

write inhibit means for inhibiting (44; 46; 28; CPU; Fig. 2) a writing process in case of an axial focus displacement event (acceleration detection), wherein the write inhibit means is designed to monitor at least two input signal capable of indicating an axial focus displacement (acceleration), to determine a speed with which said at least one input signal changes in time (defined by acceleration), and to decide that the input signal indicates that an axial focus displacement event is about to occur on the basis of an evaluation of such changes. Harada et al. discloses [0019] detecting for axial or radial displacement (e.g. focus; tracking) detected inputs to the write inhibit means; monitor at least two of its inputs signals to detect such displacement.

Although, Harada et al. does not expressly disclose to decide that the at least two of the input signals are indicating, from the above teachings, it would have been obvious to one of an ordinary skill in the art at the time of the invention to decide from the two or more inputted signals taught by Harada et al. and monitor and decides based on all signals as desired, providing

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integration, robustness, reliability and accuracy by confirming and redundantly affirming the errors, the access device can reliably decides of inhibition of writing.

As per in claim 15, Harada et al. discloses the write inhibit means being designed to inhibit the writing process if a time-derivative (defined as acceleration, which is a time derivative) of said at least one input signal predicts an axial focus displacement event (see Fig. 2; Abstract).

As per claim 16, Harada et al. discloses wherein a time-derivative particularly of a higher than a first order time derivative, because it is clearly understood since that acceleration is defined as the **second order** derivative displacement of a moving object; in this case objective lens thru focusing.

The first order derivative corresponds to merely the velocity displacement of a moving object, which one of as ordinary skill in the art would have found obvious that such analogous interrelationship for time derivative were at the time of the invention known.

It is notoriously well known that if  $x$  were the position of an object and  $t$  the time, then the first derivative is the velocity, the second the acceleration, and this would describe the motion of the object. Hence, the mere selection of the derivative to be used is a mere design choice and/or design equivalent analogous alternative at the time of the invention.

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As per claim 17, Harada et al. discloses wherein the time-derivative is higher than a first order time derivative (it is clearly understood since that acceleration is defined as the **second order** derivative displacement of a moving object; in this case objective lens thru focusing).

Claims 18 and 19 are drawn to the access device using the method of claims 14 and 15 above and rejected for the same reasons of anticipation.

As per claim 21, Harada et al. discloses at very least two of the displacement error signals (e.g. axial or radial displacement) mentioned in this claim. The other alternatively recited errors and not required to meet the claimed invention since are alternatively provided by the claim, and/or otherwise be obvious or alternative known variations.

**Claims 1-7 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kono EP 1154412.**

As per claim 1, Kono discloses a method of writing information in a storage layer of a multi-layer optical storage medium comprising two or more storage layers, the method comprising acts of: determining if axial focus displacement indicators indicate that an axial focus displacement event has occurred, otherwise determining that the axial focus displacement has not occurred; and

inhibiting the writing process in case of an axial focus displacement event occurrence (as performed by focus monitor 16; [0026]; [0033]).

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Furthermore, Kono not only teaches monitor one signal, also teaches for least two or three signals capable of indicating an axial focus displacement, for instance signal as provided to 16 in Fig. 1 and as provided to 17 in Fig. 2.

Kono also provide that is several (two or more) signals can be inputted to a means to so that they are monitored together, for instance, as taught in Fig. 1, means (15/16), teaches at least two inputs, Fig. 3, means 19, has at least two inputs etc.

Although, Kono does not expressly disclose having two inputs to the write inhibit means, from the above teachings, it would have been obvious to one of an ordinary skill in the art at the time of the invention to decide from the two or more inputted signals taught by Kono and monitor and decides based on all signals as desired, providing integration, robustness, reliability and accuracy by confirming and redundantly affirming for such errors, the access device can reliably decides of inhibition of writing.

As per claim 2, is rejected for the same reasons of obviousness outlined above, Kono further discloses such medium access device capable of writing information in a storage layer of a multi-layer optical storage medium comprising two or more storage layers; the medium access device comprising: light beam generating means for generating a write light beam; focusing means (8) for focusing the write light beam in a focal spot at a target storage layer; write inhibit means (16) for inhibiting a writing process only if the axial focus displacement event has occurred (see [0026]; [0033]).



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As per claim 3, Kono further discloses comprising a driver circuit (4) for driving the light beam generating means in accordance with a data signal representing data to be written, the driver circuit having a control input; wherein the write inhibit means (16) have an output coupled to said control input of the driver circuit, the write inhibit means being designed to generate a command signal for the driver circuit such as to effectively inhibit the driver circuit in case of an axial focus displacement event (see Fig. 2).

As per claim 5, for the same reasons of obviousness as outline above, Kono teachings would show wherein the write inhibit means (16) has at least three inputs for receiving at least three different input signals capable of indicating an axial focus displacement; the write inhibit means being designed to monitor at least two (Q1; Q2) of its input signals and to inhibit the writing process if at least two of the input signals are indicative in a correlated way of the occurrence of an axial focus displacement event (See Fig. 5).

As per claim 6, for the same reasons of obviousness as outline above, Kono teachings would show, having at least two inputs for receiving at least one input signal capable of indicating an axial focus displacement; the write inhibit means being designed to monitor an input signal, to calculate an axial focus displacement (Q) from the input signal, and to decide that the input signal is indicative of an axial focus displacement event if the calculated axial focus displacement exceeds a predetermined displacement threshold (Th1).

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As per claim 7, for the same reasons of obviousness as outline above, Kono teachings would show wherein the write inhibit means has at least two inputs for receiving at least two input signals capable of indicating an axial focus displacement; the write inhibit means being designed to monitor an input signal, to monitor for the possible occurrence of a predefined characteristic (S signal) feature of the input signal, and to decide that the input signal is indicative of an axial focus displacement event if such characteristic feature occurs (See Figure 5).

As per claim 11, for the same reasons of obviousness as outline above, Kono teachings further comprising at least one optical detector (7) for receiving light reflected from the storage medium; the write inhibit means (16) being designed to monitor at least one signal derived from at least one detector output signal (see Fig. 1).

As per claim 12, for the same reasons of obviousness as outline above, Kono teachings the write inhibit means (16) being designed to monitor at least one of a signal corresponding to the reflected central aperture signal obtained from a forward-sense diode of the sensor, or to monitor at least a signal corresponding to the focal error signal (S), or to monitor at least a signal corresponding to the focal error signal integrated with a predetermined time constant (see Fig. 5).

As per claim 13, Kono discloses capable of handling at least one of DVD-discs or BD discs.

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As per claim 20, Harada et al. discloses at very least two of the displacement error signals. The other alternatively recited errors and not required to meet the claimed invention since are alternatively provided by the claim, and/or otherwise be obvious or alternative known variations.

**Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kono EP 1154412 in view of Harada et al. JP 2004-079103.**

Kono also provide that is several (two or more) signals can be inputted to a means to so that they are monitored, but does not expressly disclose monitoring to determine the speed with which said at least one of its input signals changes in time or such as a time-derivative, and to decide that the input signal indicates that an axial focus displacement event is about to occur on the basis of an evaluation of such changes.

However, it such monitored input signal are well known in the art as evidenced by Harada et al. discloses (See Abstract; FIGS. 1-2) a medium access device having such write inhibit means for inhibiting (44; 46; 28; CPU; Fig. 2) a writing process in case of an axial focus displacement event (acceleration detection), wherein the write inhibit means is designed to monitor at least two input signal capable of indicating an axial focus displacement (acceleration), to determine a speed with which said at least one input signal changes in time (defined by acceleration), and to decide that the input signal indicates that an axial focus displacement event is about to occur on the basis of an evaluation of such changes.

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It would have been obvious to one of an ordinary skill in the art at the time of the invention to monitor such speed change in time as taught by Harada et al, in order to avoid write errors and prevent and anticipate such possible errors by detection of the speed changes, as taught by Harada et al.

**Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kono EP 1154412 in combination with Harada et al. JP 2004-079103 and further in view of Hayashi et al. US Patent Application Publication 20020101803.**

Although the combination above does not expressly shows having at least one vibration/acceleration sensor and the write inhibit means being designed to monitor at least an output signal from the at least one vibration/acceleration sensor. It is well known in the art the use of such vibration sensors to monitor vibrations or disturbances in the optical system as to inhibit writing operations in response to such events, as evidenced by Hayashi et al. (see Fig. 1; #100).

It would have been obvious to one of an ordinary skill in the art to provide a vibration sensor to monitor the same in order to avoid error in the writing operations by interrupting the writing in response to an event of shocks etc. as taught by Hayashi et al.

### ***Response to Arguments***

Applicant's arguments filed 02/11/2010 have been fully considered but they are not persuasive.

Applicant argues that non of the references mentioned discloses the requirement of at least two of the displacement error signals.

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The examiner cannot concur and does not find Applicant arguments compelling.

The examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. In this case, Kono as well as Harada et al. teach having at least two inputs and it would have been obvious to one of an ordinary skill in the art at the time of the invention to decide from the two or more inputted signals taught by Kono and/or Harada et al. as desired, because it would provide the expected and predictable result of providing integration, robustness, reliability and accuracy by confirming and redundantly affirming for errors occurring, so the access device can reliably decides of inhibition of writing.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JORGE L. ORTIZ CRIADO whose telephone number is (571)272-7624. The examiner can normally be reached on Mon.-Fri 10:00 am- 6:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jorge L Ortiz-Criado/  
Primary Examiner, Art Unit 2627